



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,792	12/31/2003	Muraleedhara Herur Navada	10559-907001 / P17955	5367
20985	7590	05/17/2007		
FISH & RICHARDSON, PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER NGO, NGUYEN HOANG	
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			05/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/749,792

Applicant(s)

NAVADA ET AL.

Examiner

Nguyen Ngo

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-7, 15-20, 24-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. Specifically claim 18 recites a switch by itself but does not appear in combination with another recited element or means, therefore it is subject to an undue breadth rejection under 35 U.S.C 112, first paragraph. In re Hyatt, 709 F.2d 712, 714-715, 218, USPQ 195, 197 (Fed. Cir. 1983). The present claims depends on a recited property, a fact situation comparable to Hyatt, where the claim covers every conceivable structure for achieving the stated property while the specification discloses at most only those known to the inventor. Therefore, the specification is non-enabling for failing to disclose all possible means for performing the stated function. The same rationale also applies to claims 1-7, 15-20, 24-26.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2616

5. Claims 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 15 recites a packet forwarder comprises a process to... It is unclear as to whether the "forwarder" is a method or apparatus.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 8-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claims 8-14, claims the non-statutory subject matter of a program. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1754 (claim to a data structure per se held nonstatutory). Therefore, since the claimed programs are not tangibly embodied in a physical medium, encoded on a computer-readable medium and

Art Unit: 2616

clearly recited as a computer program then the Applicants has not complied with 35 U.S.C 101.

Regarding claim 8-14, which states a computer program product, tangibly embodied in an information carrier, is directed to non-statutory subject matter. According to MPEP, when nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

Art Unit: 2616

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 2, 4, 5, 7, 8, 9, 11, 12, 14-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 4, 5, 7, 8, 10, 11, 12, 14, 15, 17, 18, 20, 21, 23, 24, 26, of copending Application No.10/750,554. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are a broader version of the claims from application 10/750,554 (US 2005/0198362).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 6, 8, 9, 13, 15, 16, 18, 19, 21, 24, 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Salett et al (US 6490276), hereinafter referred to as Salett.

Regarding claim 1, 8, 15, 18, 21, 24, Salett discloses a method comprising:

inserting a vector in a packet (64 bit word that recognizes the presence of 48 ports on a

Art Unit: 2616

switch and eight switches total on a network. The lower 56 bits of the 64-bit CAM cycle word are used to indicate routing information for a data frame. The encoding is in a vector form of 1 bit per port, col3 lines 45-63) that identifies a first device (network switch from plurality of switches shown in figure 2) in a stack of packet forwarding devices to receive the packet (switch 205 updates the header information of the data frame to indicate that it originated from switch 205, col4 lines 40-50 and figure 2).

Regarding claim 2, 9, 16, 19, 25, Salett discloses the method of claim 1 further comprising:

using the vector (64 bit word) and a table (CAM) to determine a port for sending the packet to the first device in the stack of packet forwarding devices (station A 215 first transmits a data frame it is received by switch 205 on port 4. The CAM 213 in switch 205 updates a station list contained in the CAM 213 to indicate that station A 215 is on port 4, col4 lines 39-50).

Regarding claim 6, 13, Salett discloses the method of claim 1 wherein the first device includes a router (switch, figure 2).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2616

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 3-5, 7, 10-12, 14, 17, 20, 22, 23, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salett et al. (US 6490276), in view of Abali et al (US 5721820), hereinafter referred to as Salett and Abali.

Regarding claim 3, 10, 22, Salett fails to specifically disclose copying the packet for sending through a second port identified by using the vector and the table. Salett however discloses that computer networks are used to interconnect many computing resources (col1 lines 10-17). Abali further discloses a method for routing data through one or more routes from source to destination (col2 lines 15-45). It would have thus been obvious to a person skilled in the art at the time the invention was made to copy the packet for sending through a second port identified by the vector and table (another path from source to destination) as disclosed by Abali into the stackable switch port collapse mechanism as disclosed by Salett in order to ensure delivery of packet communication from source to destination in a efficient and reliable manner.

Art Unit: 2616

Regarding claim 4, 7, 11, 14, the combination of Salett and Abali, more specifically Abali discloses wherein the vector includes a bit identifying the first device in the stack of packet forwarding devices to receive the packet (each word indicates a switch port and as the message packet proceeds in the network, each switch examines the first word and forwards the packet through the indicated output port (another switch to receive the packet), col1 lines 45-60).

Regarding claim 5, 12, 17, 20, 23, 26 the combination of Salett and Abali, more specifically Abali discloses the method of claim 1 further comprising:
removing the vector from the packet for sending the packet to a second device external to the stack of packet forwarding devices (the switch also strips off the first word before forwarding the packet to the next level in the network. Thus the packet contains no routing information upon arriving at its ultimate destination, col1 lines 59-65).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Singh et al. (US 2006/0013212), Port Aggregation Across Stack of Devices.

b) Kalkunte et al. (US 2002/0012345), Cascading Of Gigabit Switches.

c) Foglar et al. (US 2005/0243818), Router IP Port For An IP Router.

d) Fite, Jr. et al. (US 6496502), Distributed Multi-Link Trunking Method and Apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571) 272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

N.N

Nguyen Ngo
United States Patent & Trademark Office
Patent Examiner AU 2663
(571) 272-8398



WING CHAN
SUPERVISORY PATENT EXAMINER